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Psychological Bases for Increasing Production

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IN production there are obviously two parties concerned. The party that is generally classified under the title of capital and the party that is generally classified under the term of labor, management being part of the organization of capital. It is customary in popular discussions to think of production as being largely a matter of labor efficiency; very little concern seems to be given to the part that the organization of capital plays in production. However, one of the obstacles to production lies in the inefficiency in the organization of capital. Indeed, the industrial engineers tell us that capital is efficient to a very small degree indeed. One such engineer is responsible for the statement that in the blast furnaces of the steel and iron industry in the United States "the restriction of output by the employers in 1914 caused a loss in output equivalent to a strike of all the men in the entire industry for about six months during the year."¹ In other words, production may be seen from the side of the organization of capital as well as from the side of labor, and I am sure that there is a story to unravel there which some day will be done and will be very significant for those of us who are interested in production. But I am not an industrial engineer and it is not my problem to develop that field herein.

LABOR AS A FACTOR IN PRODUCTION

If production is looked at from the point of view of labor, it is seen that

¹Polakov, W. N., in the *New York World*, January 25, 1920.

labor is certainly responsible for variability in the amount of production. Labor may be responsible in a good many ways; that is to say, production may be slowed up or hindered by strikes. There may be that peculiar custom known as sabotage practiced. There may be a good deal of green labor, there may be a very high labor turn-over. In other words, labor may be responsible in a great many ways for production, and I am not going to attempt to go over all of the points which might be charged up to the responsibility of labor. However, I want to pass in review, rather briefly, several plans or schemes devised for improving the situation. I want to speak somewhat of welfare work, of personnel management, of scientific management and of certain schemes that have been called industrial democracy.

In discussing these subjects I am not looking at them primarily from the point of view of the details of an employment manager or as a captain of industry. There are a great many others who have had better opportunities for that type of observation than I have had. What I am going to try to do is to look at some four or five of these devices from the psychological point of view and see whether the recent development of psychology will contribute anything of significance or value with reference to their possible successful application in the future. Production is certainly partly a psychological matter, and certainly unrest is very largely a psychological matter. It is probable that my conclusions may not be quite as specific-

ally positive as though I had considered them in certain practical detail, but I do think that it is quite possible that psychology may throw a certain amount of light on the subject in general.

MAN'S PSYCHOLOGICAL EQUIPMENT

In regard to the term psychology, I want to point out in what sense it is here used. Mankind, whether he be an employer or employee, is born into this world with certain equipment. This equipment consists, on the physiological side, of muscles, blood supply, digestive tracks, glands, etc. On the psychological side, the equipment of man consists of certain nervous organizations with which are correlated certain tendencies which are generally grouped into two classes—one to be spoken of as innate capacities, and the other, rather more generally as drives. These drives have been customarily referred to by the psychologists as instincts. These special capacities, the first class mentioned, are illustrated very well, perhaps, by an aptitude towards musical ability or an aptitude towards mechanics, or an aptitude towards language or mathematics, whereas the drives are much more likely to be associated with the emotions, like anger, fear, love, hate. They are expressed as general desires to migrate, to be sociable, to accumulate or acquire things, to assert one's self, etc.

If man were thought of in this light, from the point of view of his equipment, it is seen that his equipment is one which seems to eminently qualify him for what might be called the life of a hunter, the life which we understand man to have lived for some several hundred thousand years. Man today, however, is not living the life of a hunter, but rather he is living a life in modern cities, in civilization, and

particularly in that part of civilization which we call the factories.

MAN'S EQUIPMENT AND FACTORY WORK

In factory life the thing that is rather impressive, from the point of view of man's equipment, is that a factory only uses a part of this equipment; that is to say, in a factory if it is a man's function to take in his hand a knife and make a hole in an object passing by on a pulley, or if it is his function to observe with his eye a certain dent in some object, or if it is his function with his touch to feel the roughness of a surface, it seems as though in factory life that industry, as it were, plucks out from that marvelous and varied equipment of an individual his eye, his touch, his arm or leg, and uses just such of the equipment as it needs for its specific purpose.

Just as industry singles out for its use a specific muscle, in very much the same way industry plucks out of this instinctive equipment and of these innate capacities only such aptitudes as it needs to use for the particular mechanical process. If a workman pursues a life of this sort in a factory for a good many hours during the day and pretty constantly during the year, there is very little time for any use of the other parts and features of this mechanism, and I ask, is all well with the over-centralization of activity on some parts of this equipment and lack of use of other parts of the equipment? So far as I can gather from psychology the answer is that the condition is quite unsatisfactory, that ill health sets in because of a lack of an all around use of this equipment on the muscular side, and something like a mental strain and nervousness and tendency toward insanity results from this peculiar singling out only of the particular psychical factors for use.

WELFARE WORK

With this as a brief concept of psychological background underlying the worker and his industry, we might take up for consideration some of these schemes, of industrial adjustment mentioned in the opening paragraphs. I shall consider the idea of welfare work with the object of inquiring to what extent the welfare work holds a clue to the solution of the problem of production and of the problem of industrial unrest. In so far as welfare work provides activity for other parts of man's mechanism that are not used in the factory, to that extent does welfare work promote a healthful condition, because if a part of this mechanism is not used the result is a strain, which in most features of the equipment leads specifically to unrest. Practically, welfare work really concerns the physiological and health aspects within an industry, sometimes certain aspects of home life, and occasionally it concerns itself with the recreation. But if welfare work be conceived theoretically as covering a field providing such hygienic activity for this equipment which is unused, all of it that is unused, welfare work would certainly do a very wonderful thing for industry.

Moreover, I should think on theoretical grounds that welfare work, conceived in this very broad fashion, would go a long way toward eliminating a great deal of industrial unrest, and in so far as I have seen or read of plants where a very extensive plan of welfare work is carried on, it tends to a certain extent to achieve this result. Of course, the great difficulty in putting into force any such extensive plan as this would be the question of cost, if thought of from the employer's point of view, because welfare work is supposed to be an eminently practical proposition and we put on only so much of it and we apply it only in such specific ways as will yield a return on the investment.

A great many employers are loath to develop the thing much further because of its added cost. It is true that a man like Lord Leverhume, for instance, would say that very extensive types of welfare work would pay on account of results which would be achieved, but if you ask yourself in detail just what the welfare work would be if thus carried out, you see that it would take you into a great many other fields which are called by other names than welfare work, as for instance, personnel management, profit sharing, industrial democracy, etc.

Of course, the idea of personnel management, as well as that of profit sharing and industrial democracy, is really part of this broader theoretical picture of welfare work I have delineated. No doubt personnel work pays, of course, but I doubt if welfare work ever extended into such general fields as to wholly meet the problem as I have laid out theoretically; but to the extent that it does extend its activities, to that extent does it tend to certainly allay the unrest. As to whether that will increase production or not, I question very much, because I think this original equipment of man was certainly never laid out for the sort of production which modern industry puts on the worker, particularly the monotonous sort, but in so far as industrial unrest is a cause of shortage of production, I think on psychological grounds welfare work might be expected to be partly satisfactory, measured by the extent to which it goes, but not necessarily specifically adding to and increasing production.

SCIENTIFIC MANAGEMENT

We have had considerable discussion at times of a device known as scientific management, and if you will turn back the time-table a few years you will see with what hope business

looked forward to scientific management as a cure of the production and unrest issues. But, as worked out in the studies which I have seen, scientific management rather tends to work the other way from the psychological point of view, because too often scientific management concerns itself with making a man a sort of a machine. It is true that scientific management does allow certain rest periods at proper times, and in so far as the fatigue element goes it is, no doubt, quite satisfactory. As practically applied it is not fitted to this instinctive and physiological equipment which man has, but is rather calculated to work in the opposite direction, namely, to make man a still greater machine, and I think that is the reason why scientific management has not met with better success than it has, because they have not considered this broad, physiological background which ought to be the basis of any true scientific management.

CREATIVE IMPULSE IN INDUSTRY

There are two interesting suggestions found in recent literature, which are concerned specifically with increasing production. One of these schemes centers around the problem of what is called the creative impulse or sometimes the instinct of workmanship. It is known that man is born into the world with a tendency to manipulate objects, which some psychologists have called the instinct of construction, and, of course, it is quite well known that mankind takes a certain interest in his work. Some students and writers have thought that the worker has the instinctive equipment, the instinct to construct, which ought to work itself out into a marked production. Considerations of this sort are found in recent literature. I know of one man, for instance, who has made the claim that he can make any type of labor interesting.

Another author has written a book on the subject of the creative impulse in industry, claiming that by instituting a proper system of education this creative impulse can be developed. Others have written on the subject of instinctive workmanship. Of course, from the employer's point of view this would be an extremely attractive thing. You see if you could merely get a person sufficiently interested in his work by playing on this instinct, so that he would not be concerned or care about such things as pay but would be chiefly interested in giving outlet to this instinct of construction in increased production, it would be very pleasing to those drawing dividends. But a closer inquiry into the nature of this instinct is disillusioning. It is really more like a psychological aptitude, like a tendency toward music or a gift in the direction of art, or something of that kind, rather than like one of the stronger drives or instincts. There are unquestionably some individuals who have such an aptitude and who are willing to work on this aptitude with very little regard for wages or very little regard for other features that make for a normal life.

This particular aptitude never works very well unless associated with one of the drives which I call an instinct. To put it in simpler terms, finding an interest in your work means not only a joy in the technique as such, but putting yourself into your work as well. Putting yourself into your work brings up another psychological concept, the concept of self. We tend to identify our work sometimes with ourselves. You can understand how a poet might put himself into his poem, or how an artist might put himself into his picture; that is to say, a particular type of work mirrors, or is your personality. If you accept this conception, the instinct of workmanship and the creative impulse become a very

much broader thing from the psychological point of view. It is tied up with the drive of ambition and self. It tends to be merged with what we call morale, or loyalty, because one's concept of self involves not only possible loyalty to organization, identifying one's self with one's plant, but centers around the *esprit de corps* as well.

SCHEMES OF INDUSTRIAL DEMOCRACY

This idea brings me to the last point which I want to make, and that is that productivity can be developed quite well and on psychological ground, by so working out industrial conditions that the worker will project himself, his psychological self, into the work. When this is done the creative impulse or the instinct of workmanship is merged with the concept of self, the concept of self being expressed as a loyalty to the industry. This analysis, when applied, really comes very close to being the sort of thing which we speak of as industrial democracy. Workmen are much more likely to identify themselves with their task if they in a way have a certain share and responsibility in the control and management. It is to my mind a question whether we can develop any such scheme of the instinctive workmanship in any other way than by making it possible for the worker to identify himself in this broad way with the type of work. I should, therefore, certainly look forward to seeing schemes of industrial democracy, shop committees or plans where the workers take an integral part in the industry as being extremely effective. On the psychological ground, of course, the only point that is of special theoretical interest right here is the practical question as to what extent certain ideas and concepts, which are nowadays prevalent, tend to hinder or block any such identification of self with the task in hand. In other words, to what extent

are the workers aware of what you might call class struggle or class interest; to what extent, for instance, are workers familiar with profiteering, with the making of excess profits, with exploitation of labor and with the general technique of class struggle?

The workers realize the unequal distribution of wealth, something of profiteering, and they are becoming quite a bit educated in this general concept of industrial democracy, and to the extent that they have this general idea of class struggle, these schemes of industrial democracy are really illusory. I mean to say that knowledge and education are making workers sophisticated and skeptical, and their loyalty cannot be held for very long except by very genuine plans. Knowledge of how profits are made and to whom they go make it more difficult to hold his loyalty.

Industrial democratic schemes would seem to me to work probably for a short time and it is quite conceivable that workers' loyalty and the workers' interest can be secured. The real question is how long these schemes are going to last. I should guess that productivity will in the course of a few years really center more and more around the control of industry by workers. Considerable betterment can be expected, but hardly a static Utopian condition to arise out of the psychological background of the workman. In other words, this psychological background I have set forth really implies that capital and labor must go on through an evolutionary period. I would be very much inclined to question whether any of these schemes now outlined are completely satisfactory. They will be more satisfactory on the psychological basis to the extent that they work out industrial control and will fall short to the extent that they fall short of genuine democratic industrial control.